Introduction

Some drug forms are not adapted to children or elderly. Lists of crushable tablets or openable capsules are already published but don't consider palatability modifications. The palatability is a part of the acceptability, particularly in paediatric population. The modification of the palatability of a drug may decrease the drug compliance.

Physicians sometimes want to know the palatability of a drug. The answer can conduct to change the drug form, the molecule or to mask the taste with another substance (beverage, food).

Aim

The aim of this study is to determine the palatability of diluted oral solid medications and oral liquid forms.

Material and methods

For oral solid forms:

The tablet is crushed or the capsule is opened to obtain a powder

Some water is added to the powder

The mixture is homogenised

For oral solid forms and oral liquid forms:

0.1 mL of the drug is sampled with a syringe

The syringe is anonymised to be tested

The drug was tasted in water and in a flavoured suspending excipient by three pharmacists.

The palatability score (PS) was determined using the 5-point numeric rating scale of the European Medicines Agency.

The possibility of administration of a fraction of the dose was also determined.

Testing conditions:

- Testers: isolated from each other
- Tested drug: unknown to the testers
- Testers: from each other
- Time between two medications: 5 minutes
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Results

Some medications cause other sensations:

- Tricyclic antidepressants are anaesthetic for mucosa
- Nafidroflofuryl and bezafibrate are irritant for the oesophagus
- Glycerine in the formulation causes a warm sensation in the mouth.

Liquid forms have a better palatability than solid forms (p<0.001). Crushed tablets or openable capsules have frequent bitter taste.

A flavoured suspending excipient can mask the taste of 80/107 solid medications but only when the bitterness was low.

Conclusion

This database provides part of the answer regarding the acceptability of a treatment. PS is an important factor for compliance, particularly in paediatric population.

A validated palatability score is required because taste varies with age, ethnic and many other parameters.

This study must be completed by other elements such as the pH of the solution, the stability of the active substance or some solubility parameters.